What is claimed is:

1. An ink-jet image forming method comprising:

jetting ultraviolet ray-curable ink from an ink-jet head onto a recording substrate while conveying the recording substrate; and

exposing the jetted ink on the recording substrate to ultraviolet rays irradiated by an ultraviolet ray-emitting light source,

wherein in the exposing step, a surface temperature of the ultraviolet ray-emitting light source is not more than 60 °C.

2. The ink-jet image forming method of claim 1, wherein the ink-jet head is a line-shape ink-jet head installed in a perpendicular direction to a conveying direction of the recording substrate, and the ultraviolet ray-emitting light source is a ultraviolet ray-emitting tube, which is longer than the line-shape ink-jet head, and is fixed at a downstream position of the ink-jet head and in the perpendicular direction of the conveying direction of the recording substrate.

3. The ink-jet image forming method of claim 1, wherein the ultraviolet ray-curable ink is jetted onto the recording substrate while the ink-jet head being moved by a carriage in

a perpendicular direction of the conveying direction of the recording substrate, and the ultraviolet ray-emitting light source is installed on the carriage.

4. The image forming method of claim 1, wherein the distance between a surface of the ultraviolet ray-emitting light source and the recording substrate is from 0.1 mm to 100 mm.

5. The image forming method of claim 1, wherein the exposing step is started in at most 1 second after an arrival of the jetted ultraviolet ray-curable ink to the recording substrate.

6. The image forming method of claim 5, wherein the exposing step is started in 0.0005 to 1 second after the arrival of the jetted ultraviolet ray-curable ink to the recording substrate.

7. The image forming method of claim 1, wherein the ultraviolet ray-emitting light source is a fluorescent light source comprising a fluorescent material.

8. The image forming method of claim 1, wherein plural ultraviolet ray-emitting light sources, which have different peak wavelengths from each other, are used in the exposing step.

9. The image forming method of claim 1, wherein the ultraviolet ray-curable ink comprises a cationic polymerization initiator and a cationic polymerizable monomer.